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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/866,616	05/30/2001	Souichi Kataoka	ND-391US	7656
466	7590	12/14/2004	EXAMINER	
YOUNG & THOMPSON 745 SOUTH 23RD STREET 2ND FLOOR ARLINGTON, VA 22202				ALEXANDER, JESSE NELSON
ART UNIT		PAPER NUMBER		
		2666		

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/866,616	KATAOKA ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Jesse N. Alexander	2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on \_\_\_\_.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_ is/are allowed.
- 6) Claim(s) 1-10 is/are rejected.
- 7) Claim(s) \_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 30 May 2001 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. ____ .
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
Paper No(s)/Mail Date ____ .	6) <input type="checkbox"/> Other: ____ .

## DETAILED ACTION

### ***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 2000-159603, filed on 05/30/2000. ***Drawings***
2. The drawings are objected to because in fig. 1, the labels "FROM" and "TO" at the ATM switch interface do not match the direction of the arrows (right hand side of element 101). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

3. Claims 2-5 are objected to because of the following informalities: the preamble "An STS frame" should be replaced with --The STS frame --. Appropriate correction is required.
4. Claims 7-9 are objected to because of the following informalities: the preamble "A frame" should be replaced with --The frame--. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
6. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the frame length of the frame with a next frame" in line 28. There is insufficient antecedent basis for this limitation in the claim. It is unclear to which frame applicant is referring, given that all frames have a next frame.

Claim 6 recites the limitation "said reassembly means" in line 18. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yasue et al. (US 2002/0093949 A1) in view of Lee (US 6,198,752 B1).

**Regarding claims 1 and 6,** Yasue et al. teaches an STS frame-ATM cell circuit emulation apparatus for cellularizing (**segmenting the STS frames or cell assembling**) an STS-(MxN) formed by multiplexing M STS-N frames formed from different channels into ATM cells and multiplexing M different STS-N frames assembled from ATM cells into an STS-(NxM) frame (**re-assembling the STS frames or cell deassembling**), comprising: circuit termination means for frame data from and to a circuit (**fig. 3, element 32(42)**); and inputting and outputting segmentation means (**cell assembler in fig. 5, element 13**) and reassembly means (**cell deassembler in fig. 5, element 14**) connected to said circuit termination means; said circuit termination means outputting frame data from the circuit as a frame pulse signal and frame data (**fig. 8, elements 51 and 103a, respectively**) to said segmentation means; said segmentation means outputting the frame pulse signal and the frame data from said circuit termination means as an ATM cell sync signal and ATM cell data (**fig. 6, output data in AAL1 cell form**); said reassembly means detecting a frame of an abnormal length from the ATM cell sync signal and the ATM cell data (**reassembly means capable to detect structured data pointer in AAL1 indicating continuation of data from a previous AAL1 cell in [0117]**), compensating, when a frame of an abnormal length is detected,

for the frame length of the frame with a next frame and outputting a resulting frame as a frame pulse signal and frame data to said circuit termination means (**Structured Data Transfer pointer field Fig. 17, element 115 in a first AAL1 cell or frame is detected by reassembly means (cell deassembler) and used to compensate for the longer STS frame by locating the frame boundary 116 in the next AAL1 cell or frame**).

Yasue et al. fails to teach buffer means for inputting an sync signal and ATM cell outputting an ATM cell data from and to an ATM switch; said buffer means temporarily storing and then outputting the ATM cell sync signal and the ATM cell data from said segmentation means the ATM switch, said buffer means temporarily storing and then outputting the ATM cell sync signal and the ATM cell data from the ATM switch to said reassembly means;

However, Lee teaches the concept of a **reception buffer 116 in fig. 1** for temporarily storing the data and synch signal (**buffer is operable to contain any type of data including data and synch signal information**). Lee teaches further the concept of a **transmission buffer 118 in fig. 1** for storing the ATM cell and synch signals.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the teachings of Yasue et al. by combining the two buffer concepts taught by Lee and inserting the combined buffer between the cell assemble/deassemble unit (segmentation and reassembly unit) and the interface to the ATM network/switch, (i.e. between Yasue et al. **fig. 3, elements 33(43) and 36(46)**, respectively). The motivation being to provide data format and speed conversion as well

via an elastic storage element between the STM circuit and the ATM network (or switch).

***Allowable Subject Matter***

9. Claims 2-5 and 7-10 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

10. Claims 2 and 6 would be allowable over the prior art of record since the cited references taken individually or in combination fail to particularly disclose an AU-pointer rewriting section for compensating, when said structured pointer supervision section detects an abnormal length of the frame, for the abnormal length of the frame with the payload of the next frame and rewriting the AU-pointer value. It is noted that the closest prior art, Saito et al. (US 5,541,926 A) discloses the insertion of dummy data in partially used or unused timeslots created by ATM cells with SDT pointers. However, Saito et al. fails to disclose or render obvious the above underlined limitations as claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

**Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to show the state of the art with respect to circuit emulation for transmitting an SDH (Synchronous Digital Hierarchy)/SONET (Synchronous Optical Network) frame, originally designed for a synchronous network, through an ATM (Asynchronous Transfer Mode) network and visa versa:

- US-6,810,039 B1 Parruck et al.
- US-5,742,600 Nishihara, Motoo
- US-6,167,062 Hershey et al.
- US-5,764,637 Nishihara, Motoo
- US-5,936,965 A Doshi et al.
- US-5,206,858 A Nakano et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jesse N. Alexander whose telephone number is (571) 272-3167. The examiner can normally be reached on 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jna3

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